

00069US1.ST25
SEQUENCE LISTING

<110> Wood, Linda
Vogeli, Gabriel
Karnovsky, Alla
Linske-O'Connell, Lisa I.
Wang, Jun
Liu, Derong

<120> Human Ion Channels

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<151> 2000-03-10

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<400> 19

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35 40 45

Thr Thr Thr Gly Gly Cys Cys Cys Cys Thr Cys Thr Ala Gly Cys
50 55 60

Ala Thr Thr Thr Gly Thr Gly Gly Ala Gly Ala Gly Gly Cys Ala Gly
65 70 75 80

Gly Cys Ala Gly Ala Cys Thr Cys Cys Ala Gly Gly Thr Cys Cys Thr
85 90 95

Thr Gly Ala Ala Ala Gly Gly Gly Ala Gly Gly Gly Thr Gly
100 105 110

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115 120 125

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195 200 205

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210 215 220

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515 520 525

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633

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taattgaaaa gattttattt gtttcatgt ggagaaagag gtgagtcctc cgattttatg 360
aatctctta gtgcagtagg acattaaatt tgctcccott ttctacttct tgccatcact 420
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<211> 636
<212> DNA
<213> Homo sapiens

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<211> 578

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<212> DNA
 <213> Homo sapiens

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 ttatTTTact agtgctgttc tgtccttcat tggttcccct agctaagatt gactgtcatt 240
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 tcctgga 727

<210> 26

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<211> 721
<212> DNA
<213> *Homo sapiens*

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cagtgTTTta atattaggGC acTTTGCTA aattactGTG tggtaacgaa taacCTCAA 180
atcccAGTgg cttataACCA caaAGGTTGA tttGTTGCTC atATTCGTG tcAGCTGTG 240
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tcCTAAAGTG tCTTGCCCAA atGTGTcatG tACCgtGTCT cTCACATTCC attGTCCAAA 420
gCaaaATCACA tggacaAGGC caATGTCACT aaaATGGAAA gTCACAGAGC CTCCACAGT 480
gcAGTgCTGC cAGTCACATG gAAATGCACT gtATGTATAT aATCCTCTTA gagGAAACGA 540
acaATAATGT aATAATGAAA tCTGCCACAA aATACACTTA tttttACACC aaATCTTTT 600
ttaatttaat taccatatGA ttcAGCAATT ttACTCTTAA gtATATATTc aaaAGAACTG 660
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<210> 27
<211> 680
<212> DNA
<213> Homo sapiens

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680

<210> 28
<211> 331
<212> PRT
<213> Homo sapiens

<400> 28

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35 40 45

Gly Gly Gly Gly Thr Thr Thr Ala Gly Ala Cys Ala Gly Gly Ala
50 55 60

Thr Gly Thr Thr Cys Thr Thr Gly Gly Thr Thr Ala Gly Ala
65 70 75 80

Thr Thr Thr Gly Gly Thr Ala Thr Cys Ala Thr Gly Thr Gly Thr Cys
85 90 95

Thr Thr Ala Gly Gly Thr Ala Thr Thr Ala Thr Ala Thr Cys Thr
100 105 110

Thr Thr Ala Thr Cys Cys Cys Thr Thr Ala Ala Cys Cys Ala Thr Ala
115 120 125

Cys Ala Cys Ala Thr Ala Cys Thr Thr Thr Ala Cys Thr Thr Gly Gly
130 135 140

Gly Gly Thr Ala Ala Cys Cys Thr Thr Ala Gly Thr Ala Ala Ala Thr
145 150 155 160

Ala Ala Gly Ala Thr Cys Thr Thr Cys Ala Ala Thr Thr Ala Ala Gly
165 170 175

Cys Thr Thr Ala Gly Ala Ala Cys Thr Thr Gly Thr Ala Gly Gly
180 185 190

Ala Thr Ala Thr Thr Ala Gly Ala Ala Gly Cys Cys Ala Gly Ala
195 200 205

Gly Thr Cys Cys Ala Thr Ala Thr Cys Thr Gly Thr Thr Thr Gly Thr
210 215 220

Gly Gly Gly Gly Ala Cys Ala Ala Cys Thr Cys Ala Gly Ala Cys Ala
225 230 235 240

Thr Cys Cys Cys Ala Thr Cys Thr Thr Cys Cys Ala Thr Thr Gly Ala
245 250 255

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Cys Thr Ala Thr Ala Thr Thr Thr Gly Ala Gly Thr Gly Ala
260 265 270

Cys Thr Thr Thr Thr Cys Gly Thr Ala Ala Thr Thr Ala Gly Ala
275 280 285

Cys Thr Cys Thr Cys Thr Ala Cys Cys Thr Thr Cys Ala Ala Ala Thr
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<210> 29
<211> 610
<212> DNA
<213> *Homo sapiens*

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<210> 30

<212> DNA

<213> homo sapiens

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ccagccctccc caccgtgtac ccgtgagtct aagtcaactc tgcgttttgc attgtatcg 120

acatttgcata cttagggtt gggcatggc tagctttcc catggatctt cttttttttt 340

accatcttggc ctttccgggg tttttttttt cttttttttt

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<212> DNA
<213> Homo sapiens

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tgtgggccc ttgtcagct gtctccact gcagcttgac agctatgaaa gcaggagctg	180
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<213> Homo sapiens

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<213> Homo sapiens

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<400> 33

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cagctgcaca	agggcccagc	atgtctgtgt	gtttaccagg	gggactgccc	catggctcat	300
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<211> 680

<212> DNA

<213> Homo sapiens

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<211> 619

<212> DNA

<213> Homo sapiens

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<210> 36

<211> 605

<212> DNA

<213> Homo sapiens

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<211> 667

<212> DNA

<213> Homo sapiens

<400> 37

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 <212> DNA
 <213> Homo sapiens

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<212> DNA
<213> Homo sapiens

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 <211> 680
 <212> DNA
 <213> Homo sapiens

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 acacatgacc agccttggac acaagaggcc tttgatcaga aactgggagg cactcccaca 480
 ttccccacaat gaaattccgt ggggcctgt accctgagtt catccaacac atggttactg 540
 atcatgttagg gtgtaccagg ctatgtcaga cgtagagac accatgaaga gcaaacagtt 600
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 ccactgaacc aatggcactg 680

<210> 43
 <211> 559
 <212> DNA
 <213> Homo sapiens

<400> 43
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 gaattttaca agaaggcctc gtattataaa gtttggct tggttgtga gacttgggtt 180
 gtggacagtt tgaataaggt tttcatagaa aagcatcagt gaaagaaaga aaataaaata 240
 tattttaaag taactttcct cttccaata aaacttctaa aagtcaatac atatgacttt 300

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ttcaaaaaca	taaaaaaaaaa	tgccagat	at aggcttcc	acc caaagat	taaaataagt	360
ttttttaaa	acaaacaaac	aaacaaacaa	aaagaacata	tggctgaaat	aaaagtgcct	420
cttggtagaa	tatgcaatga	aagtgttagt	tgggtccaga	gaaacagttg	tgtgcagaca	480
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ggtgatactg	ttgaaatag					559

<210> 44
<211> 648
<212> DNA
<213> Homo sapiens

<400> 44	occttcata	gattacttt	ttcattaccc	ttgtgccata	taacatctta	gctgtgtgag	60
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ttaatttgt	attcaaatgt	.caaggtatcc	tagtacagaa	aatatcagtg	ggttattctg		180
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gatgaaactg	cttagaagat	aatgttaaggt	tctcacccaa	catgagcact	gcactcaagg		360
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tggcctccag	aagatcaac	tgaattgtag	ctatgttcc	agaatcggtt	ccttctggtg		480
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<210> 45
<211> 585
<212> DNA
<213> Homo sapiens

<400> 45	agcagtggca	tgataggttc	attccttgg	gtctattgtg	tgtgtttgg	cccccgtaaa	60
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agctctcaac	tactctcaa	gagtacctac	tgaagatcat	gtctcaact	tgctaaggct		180
gatctgggta	ttagccaact	ctctgagttg	aaggaaacag	atgtaccat	gtcatctcat		240
gaaatggagc	tctattgttc	agtagatgag	gtagtaagt	gagcagacac	tgctgtttgc		300
cttctccctg	gctaacagag	gactgacatt	gactggatta	aaggatagag	ctaccctgta		360
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gtgcaattct gaccaatgag acgtgggaga agcttgctgg ggagttggtg gggtaatttc 480
 cttttgcctt aaaaggggca aaggaaaggt acattccctt ttttttcctt ttttcatctc 540
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<210> 46
 <211> 642
 <212> DNA
 <213> Homo sapiens

<400> 46
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 agcagtcccc gcggcaccgc ccaggctgcc tgctctgggg tccctgaaa agccgcccgt 180
 gagccccacgg acttccgggt cgtaagcacg tggggcctga acatctgctt ggctgggtca 240
 gctgctatga caatgccccg gcgatcgatgc cctccagcgc tgcctgcattt ccgaggagga 300
 agcgagtcggc cacgtgaata atcgggctcc gcgggctcac agcggatgtc agaagggtcag 360
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 aaaagctggt cctttcttt ctgcctggcc cacagcttctt cctgcaaagt caaaatttgt 480
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<210> 47
 <211> 657
 <212> DNA
 <213> Homo sapiens

<400> 47
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 cgcttcctcc tcggcatgca ggcagcgctg gaggcacga tcgccccggc attgtcatag 180
 cagctgaccc agccaaagcag atgttcaggc cccacgtgt tacgaccgg aagtccgtgg 240
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ccgcagatag accatgctaa ccagcacaca ggttccctg gtccatcctc cctgacccccc	540
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aagatgcagc cagcaggaac gtcttaggttt tgcagctacc aaccaaccag gccctca	657

<210> 48
<211> 446
<212> DNA
<213> Homo sapiens

<400> 48	
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atatttccat aattaatacg tttatattat gttacttttta atggatgaat atgtatcgaa	180
gccccatttc atttacatac acgtgtatgt atatccttcc tcccttcctt cattcattat	240
ttattaataa ttttcgttta tttatttct tttctttgg ggccggcccg cctggcttcc	300
tgtctctgcg ctctggtgac ctcagcctcc caaatagctg ggactacagg ggatctctta	360
agcccccggag ggagaggtta acgtgggctg tgatgcaca cttccactcc agcttacgtg	420
ggctgcggtg gggtgggtg gggtgg	446

<210> 49
<211> 554
<212> DNA
<213> Homo sapiens

<400> 49	
tctatagctc ccaccctatt cacagaagcc tggtgatat cttctgaccg tagcacttta	60
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atggtgtcaa ttctcttggc tcagtcacg tagagttcc gcgtggtttc tccttcctt	180
agaagagggg ctggagggtt gggactataa atgccagaac cttccattgg acctccatct	240
cttgccctgca ggcagtggcc caagccatag ccacggaaat agaaacgact ttcttggatg	300
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cagagggata gagaacagac cacccatcaa tatctcatag ggaatgttat gcagacaagg	420
tgccttgggt acacaggccc attgcatgct tttatggtc acaacactac tcatgagata	480
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aggctctaag ctac	554

<210> 50
<211> 469

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<212> DNA
 <213> Homo sapiens

<400> 50		
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gactgaacgt ccaaattact tttgtgtta catactgtat gacagcggtt ctcaaaccctc	180	
tgtgtgcaga acaccctga gaacttgtta aaataacggt tcctgagccc cagcccagag	240	
cgtatggttc agtagttgg gggtgagggtt ggagaatttg cattttagt aagttcccag	300	
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cctcagccctc tacttgaagg acaaacttagc ttcttactgg attcagtggc aagattaagc	420	
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<210> 51
 <211> 445
 <212> DNA
 <213> Homo sapiens

<400> 51		
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ctgggcaaag aatgggtcat gcccattttt actggaaaga tttggAACat ttccctgtaa	180	
attgtatatt atttggattt atttctctaa ctgaatggac gttttctat atgttgccaa	240	
atcttccagt aatgcttctc attcagtgtt attaaggaga taaaaagtga cagcattttt	300	
cttggtaat taatgatggg ttttacatt ttcaactttc aaaaaatata atcaccactg	360	
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aaaaatctca atattatgtatataa	445	

<210> 52
 <211> 60
 <212> PRT
 <213> Homo sapiens

<400> 52

Val Ala Ile Arg Arg Pro Ser Leu Tyr Ile Ile Asn Leu Leu Val			
1	5	10	15

Pro Ser Ser Phe Leu Val Ala Ile Asp Ala Leu Ser Phe Tyr Leu Pro		
20	25	30

Ala Glu Ser Glu Asn Arg Ala Pro Phe Lys Ile Thr Leu Leu Leu Gly		
35	40	45

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Tyr Asn Val Phe Leu Leu Met Met Asn Asp Leu Leu
50 55 60

<210> 53
<211> 26
<212> PRT
<213> Homo sapiens

<400> 53

Ser Ala Pro Trp Leu Ser Trp Gly Ile Leu Leu Ile Leu Gly Glu Gly
1 5 10 15

Ser His Ala Pro Thr Ser Phe Tyr Ser Arg
20 25

<210> 54
<211> 22
<212> PRT
<213> Homo sapiens

<400> 54

Arg Thr Val Pro Pro Tyr Leu Tyr Asn Thr Asp Val Trp Phe Phe Phe
1 5 10 15

Ile Arg His Tyr Pro Trp
20

<210> 55
<211> 33
<212> PRT
<213> Homo sapiens

<400> 55

Gly Gly Arg Arg Gly Ser Ser Leu Pro Gln Asn Pro Thr Gly Gly Pro
1 5 10 15

Ser Ser Phe Cys Gly His Cys Ile Ser Leu Tyr Ile Leu Pro Pro Gln
20 25 30

Arg

<210> 56
<211> 35
<212> PRT
<213> Homo sapiens

<400> 56

Leu Leu Leu Leu Gly Asn Ser His Tyr Val Tyr Asp Gly Leu Ser Tyr
1 5 10 15

Ser Val Phe Pro Ile Phe Phe His Ile Phe His Phe Leu Tyr Trp Ser
20 25 30

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Pro Phe Ser
35

<210> 57
<211> 37
<212> PRT
<213> Homo sapiens

<400> 57

Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Leu
1 5 10 15

Leu Asn Lys Thr Cys Tyr Asn Asn Leu Asp Pro Pro Ser His Gln Leu
20 25 30

Leu Thr Ala His Leu
35

<210> 58
<211> 52
<212> PRT
<213> Homo sapiens

<400> 58

Asp Glu Arg Asn Gln Val Leu Thr Leu Tyr Leu Trp Ile Arg Gln Glu
1 5 10 15

Trp Thr Asp Ala Tyr Leu Arg Trp Asp Pro Asn Ala Tyr Gly Gly Leu
20 25 30

Asp Ala Ile Arg Ile Pro Ser Ser Leu Val Trp Arg Pro Asp Ile Val
35 40 45

Leu Tyr Asn Lys
50

<210> 59
<211> 27
<212> PRT
<213> Homo sapiens

<400> 59

His Phe Val Ala Leu Phe Ser Gln Asp Trp Lys Phe Val Leu Gln Ile
1 5 10 15

Leu Tyr Lys Leu Cys Leu Phe Phe Val Leu Ile
20 25

<210> 60
<211> 40
<212> PRT
<213> Homo sapiens

<400> 60

Leu Met Gln Val Trp Asp Asn Pro Phe Ile Asn Trp Asn Pro Lys Glu

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1

5

10

15

Cys Val Gly Ile Asn Lys Leu Thr Val Leu Ala Glu Asn Leu Trp Leu
20 25 30

Pro Asp Ile Phe Ile Val Glu Ser
35 40

<210> 61
<211> 37
<212> PRT
<213> Homo sapiens

<400> 61

Arg Glu Pro Asn Ser Phe Phe His Asn Gly Ile Asn Ser Thr His Asn
1 5 10 15

Thr Gly Trp Pro Asn His Leu Leu Lys Val Ser Tyr Leu Asn Thr Phe
20 25 30

Thr Met Thr Ile Lys
35

<210> 62
<211> 52
<212> PRT
<213> Homo sapiens

<400> 62

Thr Leu Ile Glu Cys Ser Met Leu Asn Leu Val Asn Leu Val Leu Asn
1 5 10 15

Arg His Asp Val Leu Ala Arg Ser Ile Phe Phe Gln Thr Thr Val Trp
20 25 30

Thr Ser Ile Thr Ser Glu Lys Gly Glu Leu Pro Leu Val Ala Ser Val
35 40 45

Thr Gln Lys Asp
50

<210> 63
<211> 42
<212> PRT
<213> Homo sapiens

<400> 63

Cys Ile Ser Asp Leu Gly Ile Phe His Tyr Ser Tyr Gln Leu Ser Ile
1 5 10 15

Ser Asn Pro Glu Asn Pro Lys His Ser Asn Glu His Phe Leu Val Ser
20 25 30

His Trp Tyr Ser Lys Asn Phe Arg Phe Trp
35 40

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<210> 64
<211> 57
<212> PRT
<213> Homo sapiens

<400> 64

Ser Ser His Val Leu Pro Pro Tyr Phe Pro Leu Leu Gly Ile Leu Pro
1 5 10 15

Arg Pro Ser Phe Phe Thr Arg Pro Val Thr Glu Tyr Thr Leu Met Arg
20 25 30

Pro Lys Pro Phe Leu Asn Ser Asn Ser Lys Ser Met Asp Ser Phe Phe
35 40 45

Leu Phe His Thr Tyr Ser Cys His Ser
50 55

<210> 65
<211> 97
<212> PRT
<213> Homo sapiens

<400> 65

Pro Glu Thr Asn Ile Gly Ser Cys Leu Glu Thr Ser His Ser Ile His
1 5 10 15

Ser Glu Arg Lys Leu Thr Gln Gly Pro Arg Gln Leu Leu Asn Pro Lys
20 25 30

Gln Leu Gln Glu Gly Thr Ile Leu Arg Thr Gln Pro Leu Ser Tyr Cys
35 40 45

Ile Leu Leu Glu Gly Pro Ile Ala Pro Val Ser Ser His Pro Trp Ser
50 55 60

Pro Ile Asp Ile Leu His Leu Tyr Ser Pro Pro Gln Leu Ala Leu Leu
65 70 75 80

Pro Arg Pro Lys Cys Lys Pro Leu Ser Val Thr Gln Leu Pro Pro Val
85 90 95

Ala

<210> 66
<211> 21
<212> PRT
<213> Homo sapiens

<400> 66

Pro Ala Arg Arg Ser Glu Arg Val Tyr Glu Cys Cys Lys Glu Pro Tyr
1 5 10 15

Pro Asp Val Thr Phe
20

<210> 67
<211> 85
<212> PRT
<213> Homo sapiens

<400> 67

Asn Ala Pro Ala Ile Thr Arg Ser Ser Cys Arg Val Asp Val Ala Ala
1 5 10 15

Phe Pro Phe Asp Ala Gln His Cys Gly Leu Thr Phe Gly Ser Trp Thr
20 25 30

His Gly Gly His Gln Leu Asp Val Arg Pro Arg Gly Ala Ala Ala Ser
35 40 45

Leu Ala Asp Phe Val Glu Asn Val Glu Trp Arg Val Leu Gly Met Pro
50 55 60

Ala Arg Arg Arg Val Leu Thr Tyr Gly Cys Cys Ser Glu Pro Tyr Pro
65 70 75 80

Asp Val Thr Phe Thr
85

<210> 68
<211> 42
<212> PRT
<213> Homo sapiens

<400> 68

Ser Leu Ser Leu Ala Gly Lys Tyr Tyr Met Ala Thr Met Thr Met Val
1 5 10 15

Thr Phe Ser Thr Ala Leu Thr Ile Leu Ile Met Asn Leu His Tyr Cys
20 25 30

Gly Pro Ser Val Arg Pro Val Pro Ala Trp
35 40

<210> 69
<211> 43
<212> PRT
<213> Homo sapiens

<400> 69

Gly Arg Leu Ala Leu Lys Leu Phe Arg Asp Leu Phe Ala Asn Tyr Thr
1 5 10 15

Ser Ala Leu Arg Pro Val Ala Asp Thr Asp Gln Thr Leu Asn Val Thr
20 25 30

Leu Glu Val Thr Leu Ser Gln Ile Ile Asp Met
35 40

<210> 70

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<211> 31
<212> PRT
<213> Homo sapiens

<400> 70

Ala Glu Gly Arg Leu Ala Leu Lys Leu Phe Arg Asp Leu Phe Ala Asn
1 5 10 15

Tyr Thr Ser Ala Leu Arg Pro Val Ala Asp Thr Asp Gln Thr Leu
20 25 30

<210> 71
<211> 43
<212> PRT
<213> Homo sapiens

<400> 71

Gln Ser His Pro Phe Leu Tyr Phe Ser Ile Cys Leu Ile Lys Gln Ser
1 5 10 15

Ser Phe Val Pro Leu Ser Ile Cys His Pro Ser Val Leu Pro Ser Phe
20 25 30

Phe Pro Gln Thr Ser Phe Tyr Ile Pro Ala Ser
35 40

<210> 72
<211> 69
<212> PRT
<213> Homo sapiens

<400> 72

His Tyr Val Tyr Leu Tyr Cys Cys Ala Asn Val Thr Thr Ile His Leu
1 5 10 15

His Asn Phe Phe His Leu Pro Lys Leu Lys Leu Pro Ile Tyr Thr Ile
20 25 30

Thr Pro Val Ser Pro Cys Pro Gln Leu Leu Ala Thr Thr Met Leu Pro
35 40 45

Cys Val Ser Met Asn Leu Ala Thr Leu Ser Thr Tyr Lys Asn His Thr
50 55 60

Val Phe Val Leu Leu
65

<210> 73
<211> 42
<212> PRT
<213> Homo sapiens

<400> 73

Phe Ser His Ile Leu Asn Ala Tyr Trp Asn Met Tyr Asn Tyr Ile Trp
1 5 10 15

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Asn Val Asp Ala Tyr Thr Ser Val Phe Leu Phe Phe Leu Glu Glu Lys
20 25 30

Val Tyr Phe Pro Pro Leu Ile Cys Val Asn
35 40

<210> 74
<211> 43
<212> PRT
<213> Homo sapiens

<400> 74

Glu Thr Asn Tyr Ser Tyr Val Val Ser Ser Leu Pro Ser Ile Phe Phe
1 5 10 15

Ile Asn Ser Val Ile Ile Pro Cys Leu Leu Phe Phe Phe Ser Glu Phe
20 25 30

Arg Val Ile Ile Ser Arg Ile Phe Ser Leu Pro
35 40

<210> 75
<211> 22
<212> PRT
<213> Homo sapiens

<400> 75

Phe Phe Glu Phe Gly Glu Trp Val Leu Glu Thr Val Lys Gly Arg Lys
1 5 10 15

Tyr Leu Phe Tyr Cys Cys
20

<210> 76
<211> 58
<212> PRT
<213> Homo sapiens

<400> 76

Glu Lys Leu Ser Ala Pro Pro Arg Val Ala Lys Arg Gly Ser Gly Gly
1 5 10 15

Ala Gly Ile Gly Cys Ala Thr Val Ser Phe Phe Gly Gln Thr Glu His
20 25 30

Ala Ala Pro Asn Asp Ser Ala Ile Phe Leu Pro Phe Pro Glu Pro Arg
35 40 45

Ala Val Gln Pro Val Ala Ser Phe Pro Asp
50 55

<210> 77
<211> 58
<212> PRT
<213> Homo sapiens

<400> 77

Trp Gln Ile Ser Leu Leu His Tyr Cys Ser Phe Pro Leu Arg Gly Leu
1 5 10 15

Tyr Thr Tyr Ser Ala Phe Pro Cys Asp Trp Gln His Cys Thr Val Gly
20 25 30

Gly Ser Val Thr Phe His Phe Ser Asp Ile Gly Leu Val His Val Ile
35 40 45

Cys Phe Gly Gln Trp Asn Val Arg Asp Thr
50 55

<210> 78

<211> 37

<212> PRT

<213> Homo sapiens

<400> 78

Trp Ile Cys Ser Glu Ile Leu Tyr Lys Cys Val Phe Lys Ala Glu Phe
1 5 10 15

Leu Gly Phe Asp Trp Leu Gly Cys Val Ile Cys Phe Met Ser Met Ser
20 25 30

Tyr Ser Thr Asn Lys
35

<210> 79

<211> 23

<212> PRT

<213> Homo sapiens

<400> 79

Val Leu Asp Arg Met Phe Leu Trp Leu Asp Leu Val Ser Cys Val Leu
1 5 10 15

Gly Ile Tyr Ile Phe Ile Pro
20

<210> 80

<211> 54

<212> PRT

<213> Homo sapiens

<400> 80

Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Leu
1 5 10 15

Leu Asn Lys Thr Arg Tyr Asn Asn Leu Ile Cys Pro Ala Thr Ser Ser
20 25 30

Ser Gln Leu Ile Ser Ile Glu Thr Glu Leu Ser Leu Ala Gln Cys Ile
35 40 45

Ser Val Val Ser Ala Glu
50

<210> 81
<211> 50
<212> PRT
<213> Homo sapiens

<400> 81

Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Leu
1 5 10 15

Leu Asn Lys Thr Cys Tyr Asn Asn Leu Ile Arg Pro Ala Thr Ser Ser
20 25 30

Ser Gln Leu Ile Ser Ile Gln Thr Ala Leu Ser Leu Ala Gln Cys Ile
35 40 45

Ser Val
50

5 <210> 82
5 <211> 34
5 <212> PRT
5 <213> Homo sapiens

5 <400> 82

Gly Asp Cys Arg Met Ala His Ala Glu Gln Lys Leu Met Asp Asp Phe
1 5 10 15

Leu Asn Lys Thr Cys Tyr Asn Asn Leu Ile Arg Pro Ala Thr Ser Ser
20 25 30

5 Ser Gln

5 <210> 83
5 <211> 30
5 <212> PRT
5 <213> Homo sapiens

<400> 83

Ala Glu Gln Lys Leu Met Asp Asp Leu Leu Asn Lys Thr Arg Tyr His
1 5 10 15

Asn Leu Ile Pro Pro Ser Arg Gln Leu Leu Thr Ala His Leu
20 25 30

<210> 84
<211> 18
<212> PRT
<213> Homo sapiens

<400> 84

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Gly Asp Cys Arg Met Ala His Ala Glu Gin Lys Leu Met Asp Asp Leu
1 5 10 15

Leu Asn

<210> 85
<211> 43
<212> PRT
<213> Homo sapiens

<400> 85

Asn Leu Val Phe Pro Lys Val Tyr Leu Leu Phe Phe Gln Met Ala Ala
1 5 10 15

Phe Phe Leu Cys Pro His Met Gly Phe Ser Leu Cys Ile Cys Ile Leu
20 25 30

Cys Leu Cys Pro Asn Phe Leu Phe Lys Ile Met
35 40

<210> 86
<211> 39
<212> PRT
<213> Homo sapiens

<400> 86

Glu Phe Thr Trp Leu Arg Arg Asn Asp Ser Val His Gly Leu Glu Thr
1 5 10 15

Leu Trp Leu Ala Tyr Thr Ile Gln Trp Tyr Phe Thr Leu Asp Thr Arg
20 25 30

Leu Gln Gln Glu Thr Gly Asn
35

<210> 87
<211> 54
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (33)..(43)
<223> Xaa is any amino acid

<400> 87

Gly Leu Thr Ser Met Leu Ile Leu Thr Thr Ile Asp Ser His Leu Arg
1 5 10 15

Asp Lys Leu Pro Asn Ile Ser Cys Ile Lys Ala Ile Asp Ile Tyr Ile
20 25 30

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Leu Glu Tyr Val Tyr
35 40 45

Ile Asn Tyr Leu Phe Tyr
50

<210> 88
<211> 42
<212> PRT
<213> Homo sapiens

<400> 88

Leu Ser Phe Ile Ser Glu Thr Lys Gln Lys Pro Leu Asn Gly Trp Phe
1 5 10 15

Leu Asn Ile Leu Pro Gln Thr Phe Pro Leu Thr Cys Ile Arg Ile His
20 25 30

Phe Gly Gly Pro Pro Leu Cys Leu Gly Met
35 40

<210> 89
<211> 43
<212> PRT
<213> Homo sapiens

<400> 89

Leu Phe Leu Phe Val Ser Phe Leu Phe Leu Gln Pro Leu Met Glu Tyr
1 5 10 15

Gly Thr Leu His Tyr Phe Thr Ser Asn Gln Lys Gly Lys Thr Ala Thr
20 25 30

Lys Asp Arg Lys Leu Lys Asn Lys Ala Ser Val
35 40

<210> 90
<211> 94
<212> PRT
<213> Homo sapiens

<400> 90

Leu Ala Ser Trp Pro Pro Val Asp His Phe Cys Arg Gln Asp Ser Gln
1 5 10 15

Lys Gly Asn His Ser Leu Asn Phe Tyr Arg Ile Ile Phe Tyr Leu Lys
20 25 30

Arg His Val His Lys Trp Gln Asp Ala Gln His Thr Ser Phe Tyr Cys
35 40 45

Val Ser Leu Tyr Cys Thr Ser Gln Ile Leu His Phe Leu Thr Asn Gly
50 55 60

Arg Phe Leu Ala Thr Leu Cys Gln Ala Asn Leu Ser Val Pro Phe Val
65 70 75 80

Gln Gln His Ala Leu Pro Ser Cys Leu Trp Val Thr Phe Trp

<210> 91
<211> 44
<212> PRT
<213> Homo sapiens

<400> 91

Arg Val Asp Gln Asp Gly His Val Lys Leu Asn Leu Ala Leu Thr Thr
1 5 10 15

Glu Thr Asn Cys Asn Phe Glu Leu Leu His Phe Pro Arg Asp His Ser
20 25 30

Asn Cys Ser Leu Ser Phe Tyr Ala Leu Ser Asn Thr
35 40

<210> 92
<211> 44
<212> PRT
<213> Homo sapiens

<400> 92

Arg Val Asp Gln Asp Gly His Val Lys Leu Asn Leu Ala Leu Thr Thr
1 5 10 15

Glu Thr Asn Cys Asn Phe Glu Leu Leu His Phe Pro Arg Asp His Ser
20 25 30

Asn Cys Ser Leu Ser Phe Tyr Ala Leu Ser Asn Thr
35 40

<210> 93
<211> 59
<212> PRT
<213> Homo sapiens

<400> 93

Leu Glu Phe Ser Pro Ile Phe Tyr Cys Leu Arg Leu Ser Ser Phe Leu
1 5 10 15

Trp Leu Ala Tyr Arg Leu Ser Pro Gln Pro Gly Tyr Leu Asp Phe Leu
20 25 30

Glu Phe Ser Pro Ile Phe Tyr Phe Leu Ser Leu Ser Cys Phe Leu Trp
35 40 45

Leu Ala Tyr Arg Leu Ser Pro Gln Pro Gly Tyr
50 55

<210> 94
<211> 38
<212> PRT
<213> Homo sapiens

<400> 94

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Phe Asn Phe Pro Pro Phe Asn Leu Val Cys Phe Thr Pro His Cys Leu
1 5 10 15

Leu Arg Ile Asp Val Cys Thr Gln Leu Phe Leu Trp Thr Gln Pro Thr
20 25 30

Leu Ser Leu His Ile Leu
35

<210> 95

<211> 46

<212> PRT

<213> Homo sapiens

<400> 95

Ala Ser Arg Arg Cys Asn Ile Val Ala Met Cys Pro Glu Ser Val Pro
1 5 10 15

Ser Gly Gly Phe Leu Val Ser Leu Thr Ser Arg Met Lys Pro Trp Thr
20 25 30

Leu Thr Val Ser Val Ala Val Leu Lys Asp Gly Val Ser Gly
35 40 45

<210> 96

<211> 43

<212> PRT

<213> Homo sapiens

<400> 96

Gly Ala Ile Leu Thr Asn Glu Thr Trp Glu Lys Leu Ala Gly Glu Leu
1 5 10 15

Val Gly Tyr Phe Pro Phe Ala Leu Lys Gly Ala Lys Glu Arg Tyr Ile
20 25 30

Pro Phe Phe Phe Pro Phe Ser Ser Leu Asp Val
35 40

<210> 97

<211> 164

<212> PRT

<213> Homo sapiens

<400> 97

Lys Arg Glu Cys His Gln Arg Arg Pro Lys Glu Gln Ile Leu Thr Leu
1 5 10 15

Gln Glu Lys Leu Trp Ala Arg Gln Lys Glu Lys Asp Gln Leu Phe Leu
20 25 30

Gln Leu Lys Lys Val Ser Met Arg Lys Lys Asn Gly Gly Glu Arg Ser
35 40 45

Arg Ala Thr Pro Ser Asp Ile Arg Cys Glu Pro Ala Glu Pro Asp Tyr

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50

55

60

Ser Arg Gly Asp Ser Leu Pro Pro Arg His Ala Gly Ser Ala Gly Gly
65 70 75 80

His Asp Arg Pro Gly Ile Val Ile Ala Ala Asp Pro Ala Lys Gln Met
85 90 95

Phe Arg Pro His Val Leu Thr Thr Arg Lys Ser Val Gly Ser Ala Ala
100 105 110

Ala Phe Ala Gly Thr Pro Glu Gln Ala Ala Trp Ala Val Pro Leu Gly
115 120 125

Leu Leu Ser Pro Tyr Leu Asn Met Gly Pro His Ser Pro Met Ala Leu
130 135 140

Val Gly Ser Ser Glu Gln Phe Ser Ala Pro Trp Gly Ala Phe Met Ser
145 150 155 160

Gln Pro Gln Pro

<210> 98

<211> 104

<212> PRT

<213> Homo sapiens

<400> 98

Gly Ser Ala Gly Gly His Asp Arg Pro Gly Ile Val Ile Ala Ala Asp
1 5 10 15

Pro Ala Lys Gln Met Phe Arg Pro His Val Leu Thr Thr Arg Lys Ser
20 25 30

Val Gly Ser Ala Ala Ala Phe Ala Gly Thr Pro Glu Gln Ala Ala Trp
35 40 45

Ala Val Pro Leu Gly Leu Leu Ser Pro Tyr Leu Asn Met Gly Pro His
50 55 60

Ser Pro Met Ala Leu Val Gly Ser Ser Glu Gln Phe Ser Ala Pro Trp
65 70 75 80

Gly Ala Phe Met Ser Gln Pro Gln Pro Tyr Val Leu Leu Gly His Phe
85 90 95

Gln His Thr Gln Thr Gly Phe Leu
100

<210> 99

<211> 62

<212> PRT

<213> Homo sapiens

<400> 99

Cys Ile Glu Ala Pro Phe His Leu His Thr Arg Val Cys Ile Ser Phe

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1

5

10

15

Leu Pro Ser Phe Ile His Tyr Leu Leu Ile Ile Phe Val Tyr Leu Phe
20 25 30

Ser Phe Leu Leu Gly Pro Ala Arg Leu Val Phe Cys Leu Cys Ala Leu
35 40 45

Val Thr Ser Ala Ser Gln Ile Ala Gly Thr Thr Gly Asp Leu
50 55 60

<210> 100

<211> 94

<212> PRT

<213> Homo sapiens

<400> 100

Gln Glu Glu Asp Ile Ile Gln Glu Ser Arg Phe Tyr Phe Arg Gly Tyr
1 5 10 15

Gly Leu Gly His Cys Leu Gln Ala Arg Asp Gly Gly Pro Met Glu Gly
20 25 .30

Ser Gly Ile Tyr Ser Pro Gln Pro Pro Ala Pro Leu Leu Arg Glu Gly
35 40 45

Glu Thr Thr Arg Lys Leu Tyr Val Asp Ala Lys Arg Ile Asp Thr Ile
50 55 60

Ser Arg Ala Val Phe Pro Phe Thr Phe Leu Ile Phe Asn Ile Phe Tyr
65 70 75 80

Trp Val Val Tyr Lys Val Leu Arg Ser Glu Asp Ile His Gln
85 90

<210> 101

<211> 43

<212> PRT

<213> Homo sapiens

<400> 101

Glu Asn Arg Cys His Thr Val Cys Asn Ser Lys Ser Asp Leu Asp Val
1 5 10 15

Gln Ser Ser Gly Ser Phe Pro Lys Ala Phe His Val Trp Leu Pro Ser
20 25 30

Cys Ser Gly Asn Thr Ser Gln Val Asp Gly Gly
35 40

<210> 102

<211> 71

<212> PRT

<213> Homo sapiens

<400> 102

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Ala Ile Lys Pro Ser Leu Gly Val Trp Ser Val Ser Glu Val Tyr Ser
 1 5 10 15

His Cys Lys Trp Ile Leu Thr Val Met Val Asn Thr Pro Gly Gln Arg
 20 25 30

Met Gly His Ala His Ser Tyr Trp Lys Asp Leu Glu His Phe Pro Val
 35 40 45

Asn Cys Ile Leu Phe Gly Phe Ile Ser Leu Thr Glu Trp Thr Phe Phe
 50 55 60

Tyr Met Leu Pro Asn Leu Pro
 65 70

<210> 103

<211> 1779

<212> DNA

<213> Homo sapiens

<400> 103

tggtaaccgtt ccggaattcc cgggatcaca ccctgccttg gggccccctct catataaggga 60

gcacagggtt gctctcccttc attcacaca ttcatgttcc actacaggaa ggggcgttac 120

tttcaccatc aattgctcag ggtttggcca gcacggggcg gatcccactg ctctgaattc 180

agtgtttaat agaaagccct tccgtccgtt caccaacatc agcgtccccca cccaaatcaa 240

catctcccttc gcgtatgtctg ccattctaga tgtgaatgaa cagctgcacc tcttgtcatc 300

attcctgtgg ctggaaatgg ttgggataa cccatttatac agcttggacc cagaggaatg 360

tgagggcatc acgaagatga gtatggcagc caagaacctg tggctccctg acatttcat 420

cattgaactc atggatgtgg ataagacccc aaaaggccctc acagcatatg taagtaatga 480

aggtcgcatc aggtataaga aacccatgaa ggtggacagt atctgttaacc tggacatctt 540

ctacttcccc ttgcaccatgc agaactgcac actcaccccttc agctcattcc tctacacagt 600

ggacagcatg ttgttggaca tggagaaaga agtgtggaa ataacagacg catccggaa 660

catccttcag acccatggag aatgggagct cctgggcctc agcaaggcca ccgcaaagtt 720

gtccaggggaa ggcaacctgt atgatcagat cgtgttctat gtggccatca ggcgcaggcc 780

cagcctctat gtcataaacc ttotcgtgcc cagtggcttt ctgggttgcac tcgtatgcct 840

cagcttctac ctgccagtga aaagtggaa tcgtgtccca ttcaagataa cgctcctgct 900

gggctacaac gtcttcctgc tcatgtatgag tgacttgctc cccaccaggta gcacccccc 960

catcggtgtc tacttcgccc tggcctgtc cctgtatggtg ggcagcctgc tggagaccat 1020

cttcatcacc cacctgctgc acgtggccac cacccagcccc ccacccctgc ctcggtggt 1080

ccactccctg ctgctccact gcaacagccc ggggagatgc tgtccactg cgccccagaa 1140

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ggaaaataag	ggcccggtc	tcaccccac	ccacctgccc	ggtgtgaagg	agccagaggt	1200
atcagcaggg	cagatgccgg	gccctgcgga	ggcagagctg	acagggggct	cagaatggac	1260
aaggcccag	cgggaacacg	aggcccagaa	gcagcactca	gtggagctgt	ggttgcagtt	1320
cagccacgct	atggacgcca	tgccttccg	cctctacctg	ctcttcatgg	cctccttat	1380
catcaccgtc	atatgcctct	ggaacaccta	ggcaggtgct	cacctgccaa	cttcagtgctg	1440
gagcttctct	tgcctccagg	gactggccag	gtctcccccc	tttcctgagt	accaactatc	1500
atatccccaa	agatgactga	gtctctgctg	tattccatgt	atcccaatcc	ggtcctgctg	1560
atcaattcca	atcccagaca	tttctccctg	ttcctgcatt	ttgttggctt	ccttcagtcc	1620
taccatatgg	ttcttaggtcc	ctcttacgtc	atctgcata	cagactatac	ctcttctgcc	1680
cgctgacttg	cccaataaaat	aattctgcag	agaaaaaaaaa	aaaaaaaaaa	aaaaaaaaaa	1740
aaaaaaaaaa	aaaaaaaaaa	aaaaaaaggc	ggccgctct			1779

<210> 104

<211> 999

<212> DNA

<213> Homo sapiens

<400> 104

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atgtctgcca	tccttagatgt	gaatgaacag	ctgcacctct	tgtcatcatt	cctgtggctg	120
gaaatggttt	gggataaccc	atttatcago	tggAACCCAG	aggaatgtga	gggcatcact	180
aagatgagta	tggcagccaa	gaacctgtgg	ctcccagaca	ttttcatcat	tgaactcat	240
gatgtggata	agaccccaa	aggcctcaca	gcatatgtaa	gtaatgaagg	tcgcatcagg	300
tataagaaac	ccatgaaggt	ggacagtatc	tgtAACCTGG	acatcttcta	cttccccttc	360
gaccagcaga	actgcacact	cacccatcago	tcattctct	acacagtgg	cagcatgtt	420
ctggacatgg	agaaaagaagt	gtgggaaata	acagacgcat	cccgaaacat	ccttcagacc	480
catggagaat	gggagctcct	gggcctcagc	aaggccaccg	caaagttgtc	cagggaggc	540
aacctgtatg	atcagatcgt	gttctatgt	gccatcaggc	gcaggcccag	cctctatgtc	600
ataaaccttc	tcgtgcccag	tggctttctg	gttgcacatcg	atgcctcag	cttctacctg	660
ccagtgaaaa	gtggaaatcg	tgtcccattc	aagataacgc	tcctgctgg	ctacaacgtc	720
ttcctgctca	tgtgagtga	tttgctcccc	accagtggca	ccccctcat	cgggtgtctac	780
ttcgcctgt	gcctgtccct	gatggtgggc	agcctgctgg	agaccatctt	catcacccac	840
ctgctgcacg	tggccaccac	ccagccccca	ccctgcctc	ggtggtcctt	ctccctgctg	900

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ctccactgca acagcccggt gagatgctgt cccactgcgc cccagaagga aaataaggc 960
ccgggtctca cccccaccca cctgcccgtt gaggtgtga 999

<210> 105
<211> 586
<212> PRT
<213> Homo sapiens

<400> 105

Gly Thr Gly Pro Glu Phe Pro Gly Ser Arg Pro Ala Leu Gly Pro Leu
1 5 10 15

Ser Tyr Arg Glu His Arg Val Ala Leu Leu His Leu Thr His Ser Met
20 25 30

Ser Thr Thr Gly Arg Gly Val Thr Phe Thr Ile Asn Cys Ser Gly Phe
35 40 45

Gly Gln His Gly Ala Asp Pro Thr Ala Leu Asn Ser Val Phe Asn Arg
50 55 60

Lys Pro Phe Arg Pro Val Thr Asn Ile Ser Val Pro Thr Gln Val Asn
65 70 75 80

Ile Ser Phe Ala Met Ser Ala Ile Leu Asp Val Asn Glu Gln Leu His
85 90 95

Leu Leu Ser Ser Phe Leu Trp Leu Glu Met Val Trp Asp Asn Pro Phe
100 105 110

Ile Ser Trp Asn Pro Glu Glu Cys Glu Gly Ile Thr Lys Met Ser Met
115 120 125

Ala Ala Lys Asn Leu Trp Leu Pro Asp Ile Phe Ile Ile Glu Leu Met
130 135 140

Asp Val Asp Lys Thr Pro Lys Gly Leu Thr Ala Tyr Val Ser Asn Glu
145 150 155 160

Gly Arg Ile Arg Tyr Lys Lys Pro Met Lys Val Asp Ser Ile Cys Asn
165 170 175

Leu Asp Ile Phe Tyr Phe Pro Phe Asp Gln Gln Asn Cys Thr Leu Thr
180 185 190

Phe Ser Ser Phe Leu Tyr Thr Val Asp Ser Met Leu Leu Asp Met Glu
195 200 205

Lys Glu Val Trp Glu Ile Thr Asp Ala Ser Arg Asn Ile Leu Gln Thr
210 215 220

His Gly Glu Trp Glu Leu Leu Gly Leu Ser Lys Ala Thr Ala Lys Leu
225 230 235 240

Ser Arg Gly Gly Asn Leu Tyr Asp Gln Ile Val Phe Tyr Val Ala Ile
245 250 255

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Arg Arg Arg Pro Ser Leu Tyr Val Ile Asn Leu Leu Val Pro Ser Gly
260 265 270

Phe Leu Val Ala Ile Asp Ala Leu Ser Phe Tyr Leu Pro Val Lys Ser
275 280 285

Gly Asn Arg Val Pro Phe Lys Ile Thr Leu Leu Gly Tyr Asn Val
290 295 300

Phe Leu Leu Met Met Ser Asp Leu Leu Pro Thr Ser Gly Thr Pro Leu
305 310 315 320

Ile Gly Val Tyr Phe Ala Leu Cys Leu Ser Leu Met Val Gly Ser Leu
325 330 335

Leu Glu Thr Ile Phe Ile Thr His Leu Leu His Val Ala Thr Thr Gln
340 345 350

Pro Pro Pro Leu Pro Arg Trp Leu His Ser Leu Leu His Cys Asn
355 360 365

Ser Pro Gly Arg Cys Cys Pro Thr Ala Pro Gln Lys Glu Asn Lys Gly
370 375 380

Pro Gly Leu Thr Pro Thr His Leu Pro Gly Val Lys Glu Pro Glu Val
385 390 395 400

Ser Ala Gly Gln Met Pro Gly Pro Ala Glu Ala Glu Leu Thr Gly Gly
405 410 415

Ser Glu Trp Thr Arg Ala Gln Arg Glu His Glu Ala Gln Lys Gln His
420 425 430

Ser Val Glu Leu Trp Leu Gln Phe Ser His Ala Met Asp Ala Met Leu
435 440 445

Phe Arg Leu Tyr Leu Leu Phe Met Ala Ser Ser Ile Ile Thr Val Ile
450 455 460

Cys Leu Trp Asn Thr Ala Gly Ala His Leu Pro Thr Ser Val Trp Ser
465 470 475 480

Phe Ser Cys Leu Gln Gly Leu Ala Arg Ser Pro Pro Phe Pro Glu Tyr
485 490 495

Gln Leu Ser Tyr Pro Gln Arg Leu Ser Leu Cys Cys Ile Pro Cys Ile
500 505 510

Pro Ile Arg Ser Cys Ser Ile Pro Ile Pro Asp Ile Ser Pro Cys Ser
515 520 525

Cys Ile Leu Leu Ala Ser Phe Ser Pro Thr Ile Trp Phe Val Pro Leu
530 535 540

Thr Ser Ser Ala Gln Thr Ile Pro Leu Leu Pro Ala Asp Leu Pro Asn
545 550 555 560

Lys Phe Cys Arg Glu Lys Lys

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565

570

575

Lys Lys Lys Lys Lys Arg Ala Ala Ala
580 585

<210> 106

<211> 332

<212> PRT

<213> Homo sapiens

<400> 106

Gly Ile Pro Gly Met Val Thr Asn Ile Ser Val Pro Thr Gln Val Asn
1 5 10 15

Ile Ser Phe Ala Met Ser Ala Ile Leu Asp Val Asn Glu Gln Leu His
20 25 30

Leu Leu Ser Ser Phe Leu Trp Leu Glu Met Val Trp Asp Asn Pro Phe
35 40 45

Ile Ser Trp Asn Pro Glu Glu Cys Gly Ile Thr Lys Met Ser Met
50 55 60

Ala Ala Lys Asn Leu Trp Leu Pro Asp Ile Phe Ile Ile Glu Leu Met
65 70 75 80

Asp Val Asp Lys Thr Pro Lys Gly Leu Thr Ala Tyr Val Ser Asn Glu
85 90 95

Gly Arg Ile Arg Tyr Lys Lys Pro Met Lys Val Asp Ser Ile Cys Asn
100 105 110

Leu Asp Ile Phe Tyr Phe Pro Phe Asp Gln Gln Asn Cys Thr Leu Thr
115 120 125

Phe Ser Ser Phe Leu Tyr Thr Val Asp Ser Met Leu Leu Asp Met Glu
130 135 140

Lys Glu Val Trp Glu Ile Thr Asp Ala Ser Arg Asn Ile Leu Gln Thr
145 150 155 160

His Gly Glu Trp Glu Leu Leu Gly Leu Ser Lys Ala Thr Ala Lys Leu
165 170 175

Ser Arg Gly Gly Asn Leu Tyr Asp Gln Ile Val Phe Tyr Val Ala Ile
180 185 190

Arg Arg Arg Pro Ser Leu Tyr Val Ile Asn Leu Leu Val Pro Ser Gly
195 200 205

Phe Leu Val Ala Ile Asp Ala Leu Ser Phe Tyr Leu Pro Val Lys Ser
210 215 220

Gly Asn Arg Val Pro Phe Lys Ile Thr Leu Leu Gly Tyr Asn Val
225 230 235 240

Phe Leu Leu Met Met Ser Asp Leu Leu Pro Thr Ser Gly Thr Pro Leu
245 250 255

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Ile Gly Val Tyr Phe Ala Leu Cys Leu Ser Leu Met Val Gly Ser Leu
260 265 270

Leu Glu Thr Ile Phe Ile Thr His Leu Leu His Val Ala Thr Thr Gln
275 280 285

Pro Pro Pro Leu Pro Arg Trp Leu His Ser Leu Leu His Cys Asn
290 295 300

Ser Pro Gly Arg Cys Cys Pro Thr Ala Pro Gln Lys Glu Asn Lys Gly
305 310 315 320

Pro Gly Leu Thr Pro Thr His Leu Pro Gly Glu Val
325 330

<210> 107

<211> 485

<212> DNA

<213> Homo sapiens

<400> 107
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gcctcggtt cccgctgggc ccttgtccat tctgagcccc ctgtcagctc tgcctccgca 120

ggggccggca tctgcccgtc tgataacctct ggctccttca cacctacaga aagacagaga 180

ctcagccatg ggctgcaaatt gtcacctgtg gagggaggga gacagggaag gaggcaggag 240

cagagaagtg gaggtggggg aagaggaatg tgacttccct caccgggcag gtgggtgggg 300

gttgagaccc gggcccttat ttcccttctg gggcgcagtg ggacagcatc tccccgggct 360

gttgcagtgg agcagcagg agtggagcca ccgaggcagg ggtggggct gggtggtggc 420

cacgtgcagc aggtgggtga tgaagatggt ctccagcagg ctgcccacca tcagggacag 480

485

gcaca

<210> 108

<211> 584

<212> DNA

<213> Homo sapiens

<400> 108
cccgacactt tgggaggcca aggtgggtgg atcacccatg ttcaggagtt tgagaccagc 60

ctggcaaca tggtaaaacc tcacccatcta aaaaaaaaaa aaaaaaaaaa attagccagg 120

cctgggtggc cgcctgttagt cccagctact tgggaggctg aggctgagac aggaggatca 180

tttgagccca ggacatggaa gttgcagtga gctgagagca tgccactcta ctccagcctg 240

ggtgacagag caagatccgt tctcaaaaaa aaaaaaaaaa aaaaaggaga gagagaaact 300

gcggccctgt cctcttgcgt tatctctcct ccagcatgga tgtggataaa accccaaaag 360

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gcctcacagc atatgttaat aatgaaggc gcatcaggta taaaaaaccc atgaaggggg	420
acagttatctg taacctggac atcttctact tccccttcga ccagcaaaac tgcacactca	480
ccttcagctc attcctctac acaggttaat tgcaatgagg tctcaggat ggggtgaatg	540
agagcaacca acaaatttaa agaaaactatg agtaaatggc gacc	584

<210> 109

<211> 38

<212> PRT

<213> Homo sapiens

<400> 109

Cys Leu Ser Leu Met Val Gly Ser Leu Leu Glu Thr Ile Phe Ile Thr
1 5 10 15

His Leu Leu His Val Ala Thr Thr Gln Pro Pro Pro Leu Pro Arg Trp
20 25 30

Leu His Ser Leu Leu Leu
35

<210> 110

<211> 60

<212> PRT

<213> Homo sapiens

<400> 110

Leu Ser Ser Ser Met Asp Val Asp Lys Thr Pro Lys Gly Leu Thr Ala
1 5 10 15

Tyr Val Ser Asn Glu Gly Arg Ile Arg Tyr Lys Lys Pro Met Lys Gly
20 25 30

Asp Ser Ile Cys Asn Leu Asp Ile Phe Tyr Phe Pro Phe Asp Gln Gln
35 40 45

Asn Cys Thr Leu Thr Phe Ser Ser Phe Leu Tyr Thr
50 55 60

<210> 111

<211> 30

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 111

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30

<210> 112

<211> 22

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 112

cccgaggctct atgtcataaaa cc

22

<210> 113

<211> 20

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 113

tcatgagcag gaagacgttg

20

<210> 114

<211> 19

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 114

gccatcaggc gcaggccaa

19

<210> 115

<211> 23

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 115

caagtcattc atcatgagca gga

23

<210> 116

<211> 20

<212> DNA

<213> Artificial

<220>

<223> Probe/Primer

<400> 116

tgcctgtccc tcatgggtggg

20

<210> 117

<211> 19

00069US1.ST25

<212> DNA
<213> Artificial

<220>
<223> Probe/Primer

<400> 117
gagcagcagg gagtggagc

19

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